DISA

2004 CUSTOMER PARTNERSHIP CONFERENCE

REALIZING THE NET-CENTRIC VISION

Closed Information Assurance (IA) Architecture for Data Centers

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Data Center IA Working Group Output

- Architecture for Data Centers that recognizes accessibility and security needs in a net centric environment
- Paradigm shift that allows Data Centers to be viewed as a single virtual enclave rather than the separate enclaves and operations that they are today
- Cooperative effort involving many elements within DISA to make sure that operational performance and availability issues are addressed equally
- Consistent with transformation goals
- Consistent with DoD 8500.2 direction

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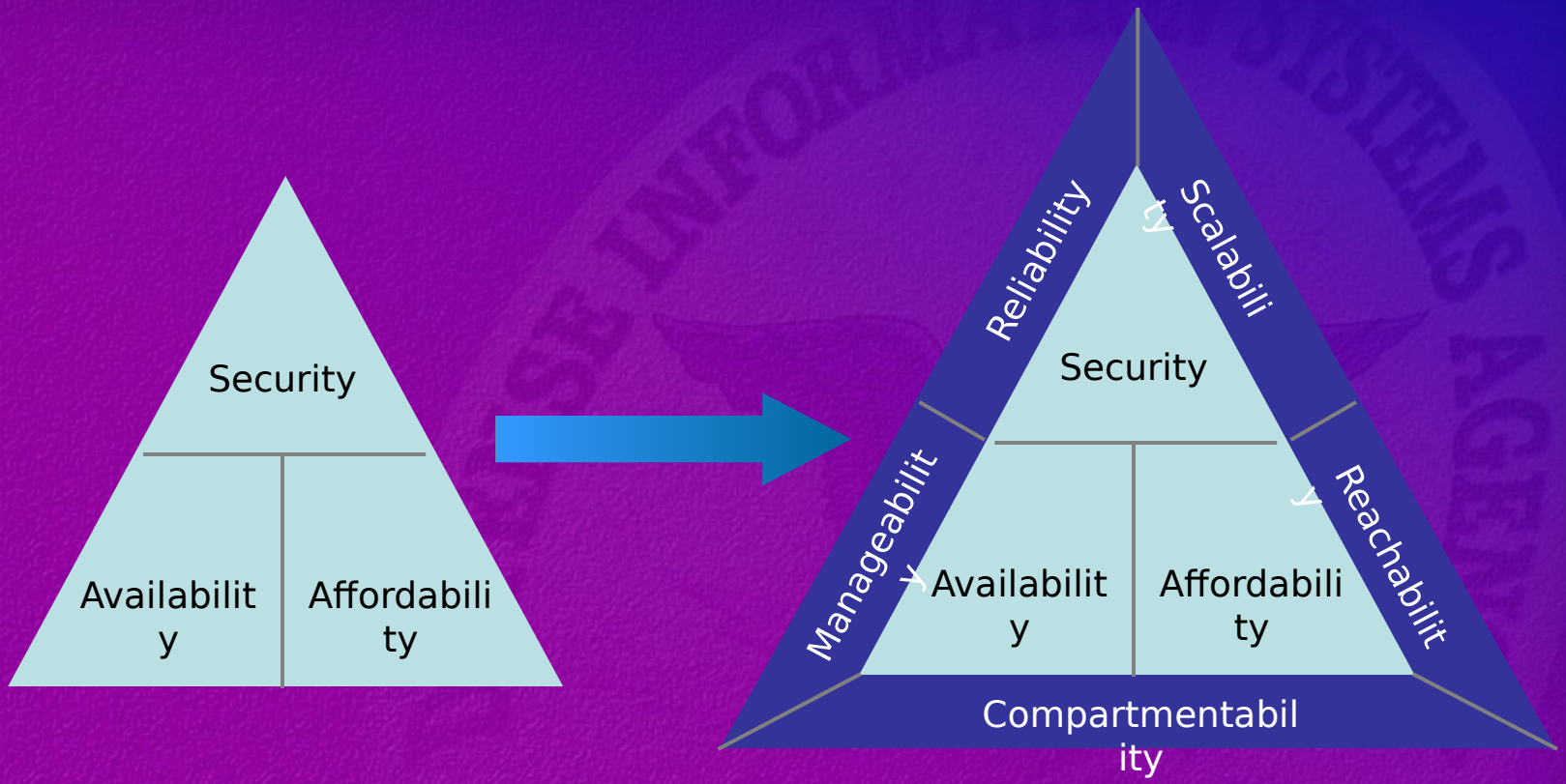
Architectural Drivers



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Net Centric Operational Considerations

- Web services oriented architectures rooted with core services
- Hosted applications and storage become services
- Need for applications and services capacity to be provisioned quickly in a distributed environment (many geographic locations)
- Users need to do ubiquitous computing
- Need for coexistence with legacy applications

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Defense Information Assurance Working Group (DIAWG) Alternatives Consideration

- **Open Architecture**
  - Essentially current Data Center transformation environment
  - Technology insertion with higher performance and new products
  - More scalable (modular) infrastructure components. POD architecture
  - Requires local perimeter defense capability at each location
- **Closed Architecture**
  - Open architecture tech insertion projects (modular) implemented
  - Creation of distributed Data Center environment. Allows for distributed hosting. Greatly increases scalability and provisioning capability.
  - Facilitates application tier separation and horizontal computing
  - Leverages strong global perimeter defense. Greatly improves defense in depth capability. Leverages enterprise Special Purpose Gateways (SPGs) facilities
  - Allows military controlled Data Center to manage and/or monitor and control access to outsourced core computing sites
  - Allows web services infrastructure to front end legacy applications
- **DIAWG recommended closed architecture**

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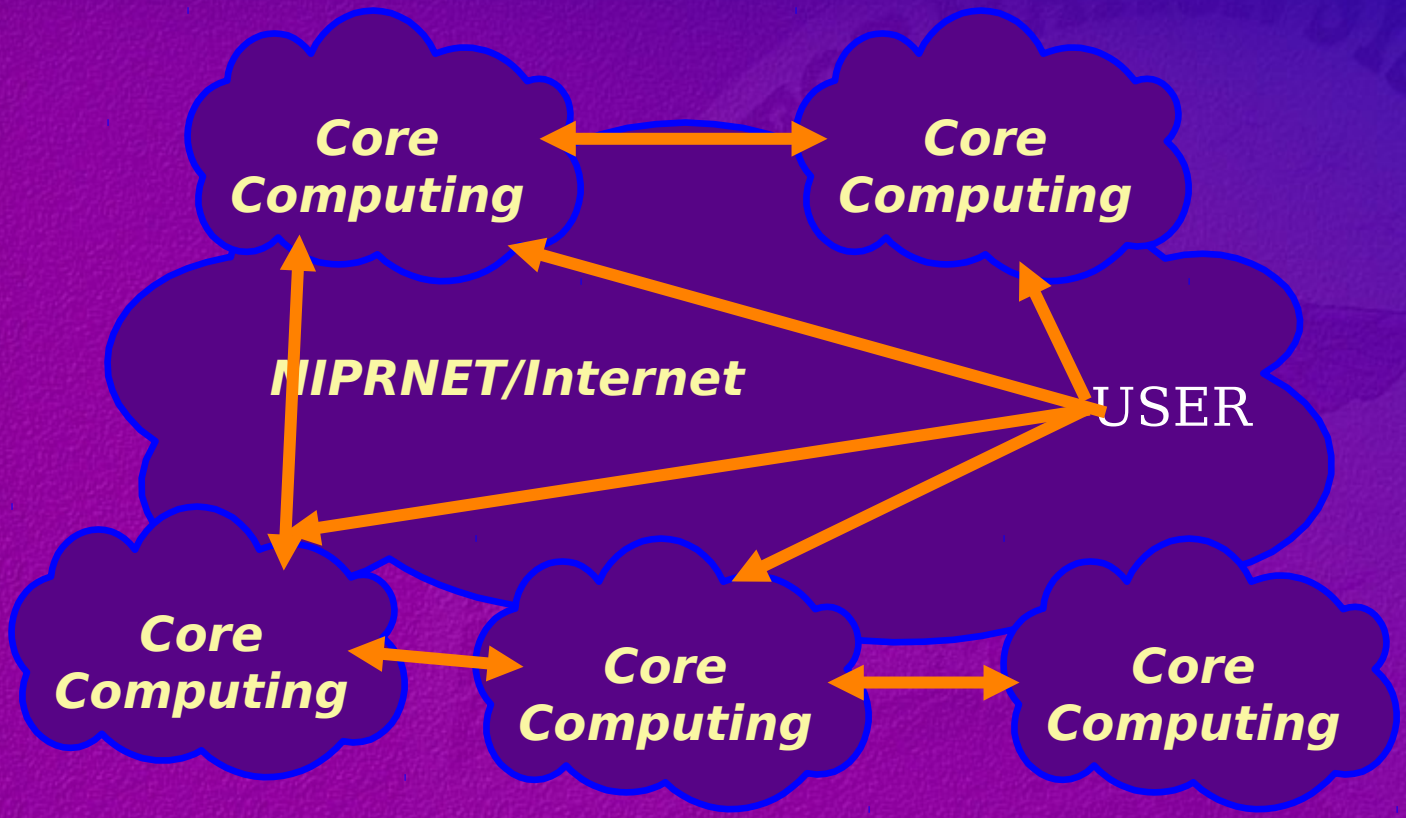
Open Architecture Model



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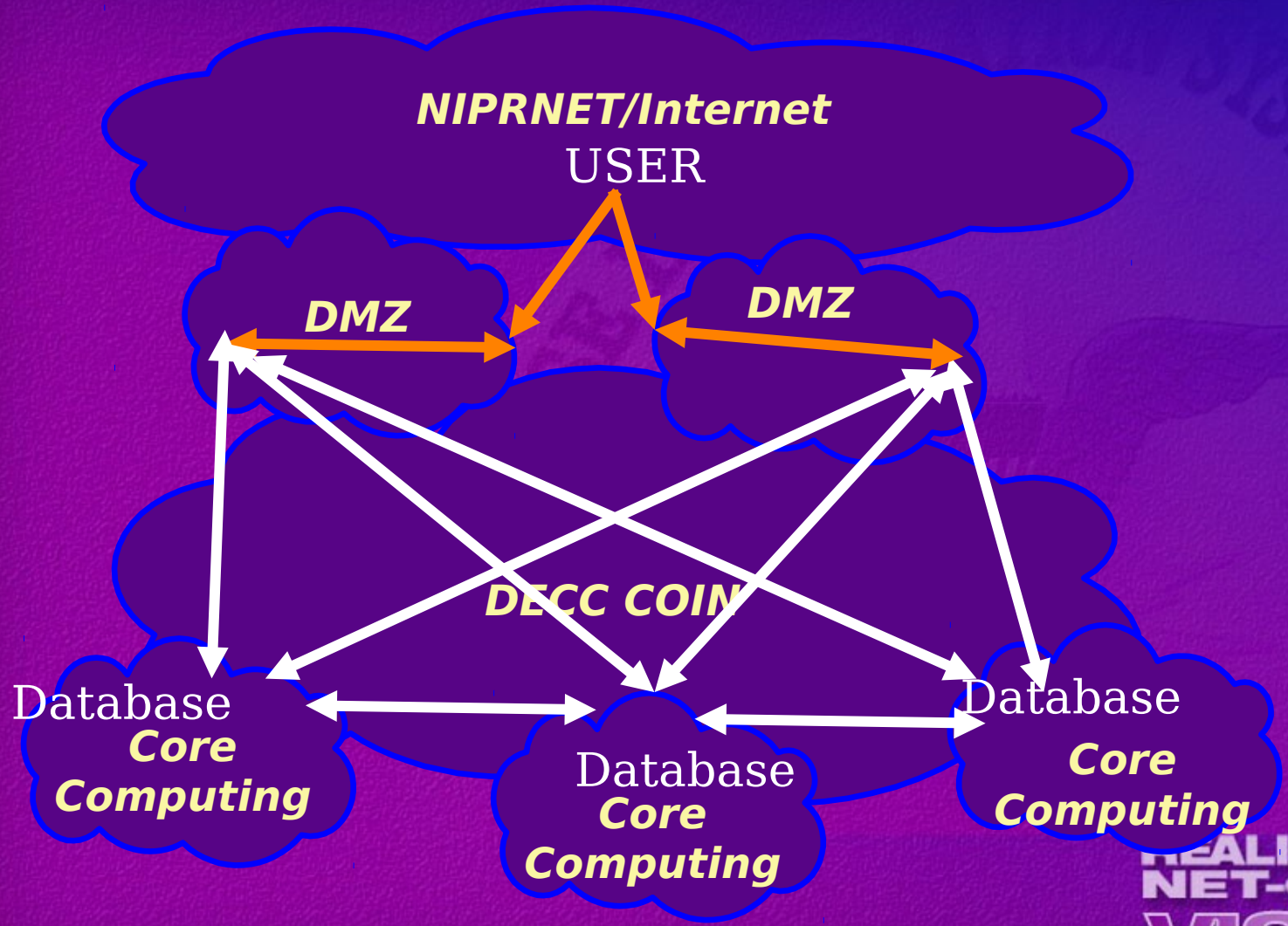
Closed Architecture Model



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Status

- **Current**
  - **DISA Computing Services currently undergoing transformation**
    - **Organizational changes to support remote management**
    - **ESM and OOB infrastructure implemented to facilitate remote operations**
    - **Essentially Open Architecture with remote management of operations**
  - **Closed IA architecture pilot**
    - **CIAE permission to pilot**
    - **Demonstration of distributed environment**
- **FY05**
  - **Implementation of closed architecture**

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Value of Closed Architecture to Application Owner and Users

- Increased security
- Increased availability by provisioning at multiple sites
- Minimization of costs for increasing security and performance requirements through shared infrastructure
- More consistent operations when distributed
- Better (appropriate and authorized) reachability from Community of Interests (COIs), theaters and the internet

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How Application User Can Best Leverage CSD Closed Architecture

- Don’t build stovepipes. Use the common storage, communications, content delivery and systems management infrastructure
- Keep application tier separation in application design. Allow for WAN latency between tiers (100 ms rt)
- Assume the application needs to be fielded in a distributed environment

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DNS in Computing Services (Pre Transformation)

- Each site operated its own SITE.DISA.MIL domain. Each DECC operated under its own autonomy
- DNS operations were detriment to distributed computing
- No real offsite capabilities

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DNS in Computing Services (after Transformation)

- Single DNS zone (CSD.DISA.MIL).
- Alias support for former SITE.DISA.MIL names
- DNS operations facilitate distributed computing and content delivery
- Consistent DNS operations (CCC) facilitate Assured Computing at geographically distant locations
- Management and SAN infrastructure DNS is hidden

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DEFENSE INFORMATION SYSTEMS AGENCY